

ASSOCIATION STUDIES (FIRST SCREENING)

NON AFFECTED	CONTROLS=76	>65 YEARS	PSA<4
AFFECTED	CASES= 112	35 SPORADIC CASES	+77 FAMILIAL CASES
POPULATION	SAMPLE SIZE	POPULATION	CHARACTERISTICS

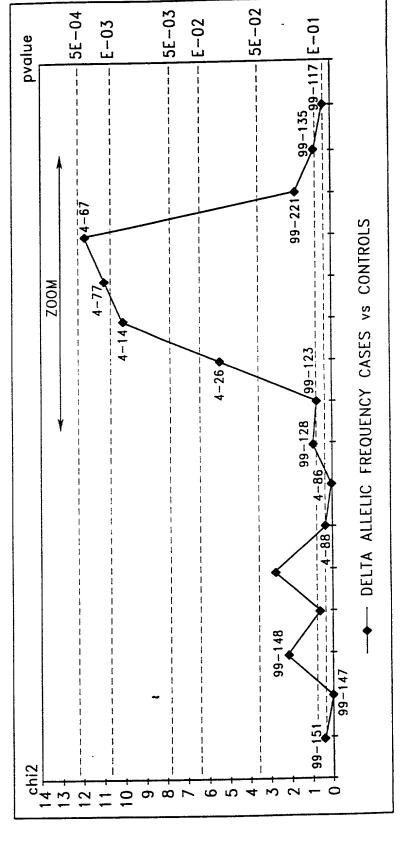


FIG.2

ASSOCIATION STUDIES (ZOOM)

UNAFFECIED	CONTROLS (104)	>65 YEARS	PSA<4	
AFFECTED	CASES (185)	47 SPORADIC CASES	+138 FAMILIAL CASES	
		CHARACTERISTICS	OF POPULATIONS	

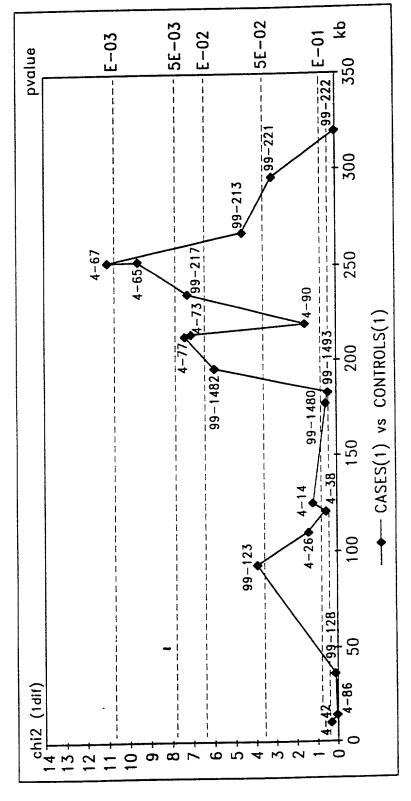


FIG.3

HAPLOTYPE FREQUENCY ANALYSIS

POPULATIONS

	AFFECIED	UNAFFECIEU
	CASES 2 (281)	CONTROLS 3 (130)
CHARACTERISTICS	143 SPORADIC CASES	>65 YEARS
OF POPULATIONS	+	PSA<4

			PVALUE			9,00E-04 ***	6,005-05 ***	1,00E-05****	10,06 9,00E-07****	2,00E-05****	-	4,00E-05****	2,00E-04***	1,00E-04***	3,00E-04***	6,00E-04***
			RELATIVE	RISK		4,42	6,46	6,78		5,17	4,78	2,33	2,17	2,32	2,01	2,05
	HAPLOTYPE	REQUENCIES		CASES CONTROLS	,	0,075 0,018	0,095 0,016	0,116 0,019	0,117 0,013	0,117 0,025	0,117 0,027	0,109	0,134	0,112	0,146	0,233 0,129
	HAPL(FREQU		CASES (2)			0,095	0,116	0,117	0,117	0,117	0,222	0,251	0,226	0,256	0,233
99-135	80725812			2,00E-01	100KB<	Ą	V									
9-221				,006-01	<29KB>>	A	A	A	V	¥	A					
4-26 4-14 4-77 99-217 4-67 99-21399-22199-135		:		1,00 <u>E</u> -01 2,00 <u>E</u> -02 2,00 <u>E</u> -02 6,00 <u>E</u> -04 9,00 <u>E</u> -02 7,00E-012,00 <u>E</u> -01	<88KB> <22KB> <17KB> <15KB> <29KB>>100KB<	9	9	9	ပ	9	9	9		9		9
4-67	B0463F01		Å	,00E-049	<17KB>	F	<u>-</u>	-	-	_	<u></u>	F	-	-	-	T
9-217	В		0.0	,00E-026	<22KB>	-	_	_	 -	_	1	-	ļ —	_	1	
4-77		11453	PG.	,00E-02	<88KB>	9	9	9	9	9		9	5			
4-14	19E08			10-300	<15KB>	1	ပ	S	ပ							
	B0189E0			,00,00	18KB>	A	4	A								
99-123	H0287B09			2,00E-011,00E-01	V	ပ										
MARKERS	BACS	CONTIGS	SENES	P VALUE	DISTANCE BETWEEN MARKERS(KB)	HAPLOTYPE 8>304KB<	HAPLOTYPE 7>286KB<	HAPLOTYPE 6<186KB>	HAPLOTYPE 5<171KB>	HAPLOTYPE 4<83KB>	HAPLOTYPE 3.1<54KB>	HAPLOTYPE 3.2<54KB>	HAPI OTYPE 2 2<39KB>	HAPLOTYPE 2<32KB>	HAPI OTYPE 1.1<17KB>	HAPLOTYPE 1.2<15KB>

FIG.4

HAPLOTYPE SIMULATIONS (100 ITERATIONS)

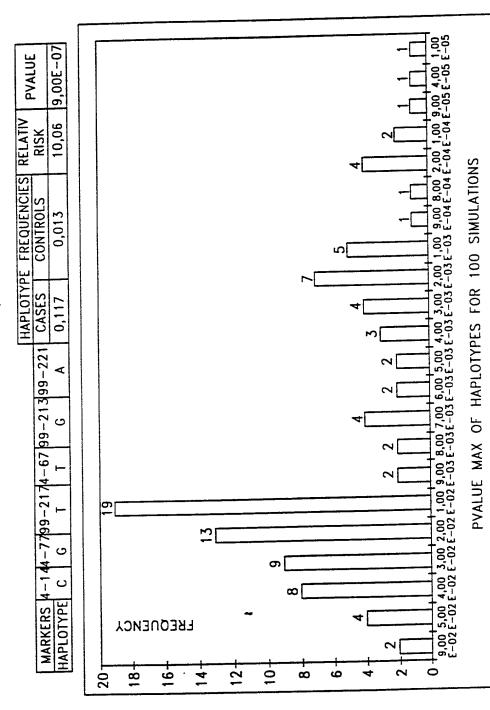


FIG.5A

HAPLOTYPE SIMULATIONS (100 ITERATIONS)

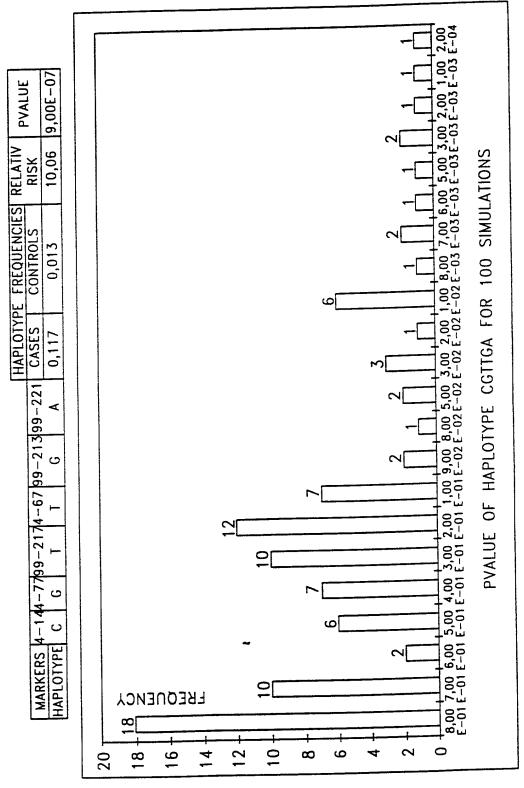


FIG.5B

MICROSEQ. OLIGOS POSITIONS.	11-23125-47 (COMPLEMENTARY)	11-23 25-47 (COMPLEMENTARY	11-23 25-47 (COMPLEMENTARY	1-23 25-47 (COMPLEMENTARY)	1-23 25-47 COMPLEMENTARY	1-23/25-47 COM	1-23 25-47	1-23 25-47	1-23 25-47
BASE	3	\ <u>\</u>			5	\ <u>\</u>	\\ -	\ <u>\</u>	V/G
SEQ ID POLYMORPHISM N* POSITION*	24	24	24	24	24	24	24	24	24
SEQ ID	48	49	20	51	52	53	24	55	26
RP SEQUENCE	TATTCAGAAAGGAGTGGG	TGAGGACTGCTAGGAAAG	GACTGTATCCTTTGATGCAC	GGAAAGGTACTCATTCATAG	GTTTATTTGTGTGAGCTTTG	TGAAAGAGTITATTCTCTGG	TTATTGCCCCACATGCTTGAG	TCATTCGICTGGCTAGGTC	AAACACCTCCCATTGTGC
SEQ ID	39	40	41	42	43	44	42	46	47
PU SEQUENCE	AAAGCCAGGACTAGAAGG	TACAGCCCTGTAAGACAC	TCTAACCTCTCATCCAAC	TGTTGATTTACAGGCGGC	GGTGGGAATTTACTATATG	AAGTICACCTICTCAAGC	ATACTGGCAGCGTGTGCTTC	CCCTTTTCTTCACTGTTC	TGGAAGTTGTTATTGCCC
SEO ID N'(MUT)	30	31	32	33	34	35	36	37	38
SEQ ID	21	22	23	24	25	56	27	28	53
MARKER	99-123	426	4-14	4-77	99-217	4-67	99-213	99-221	99-135
BAC	228	189		189/463	463	189/463	463	463	725

FIG.6A

*: POSITIONS ARE GIVEN RELATIVE TO THE SEQUENCE OF THE CORRESPONDING MARKER (i.e. SEQ ID Nº21-38 AND 57-62)

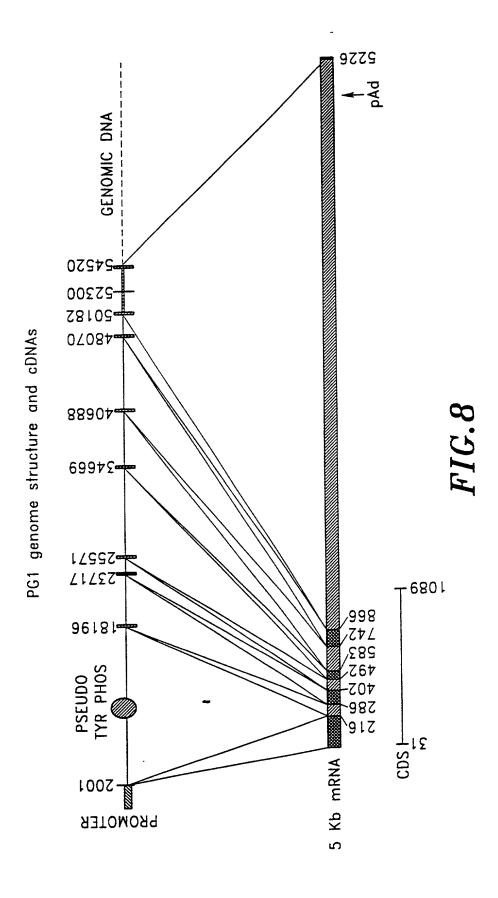
MICBOREO OLICOS DOCITIONES	MICHOSEQ. OLIGOS L'OSITIONS	1-23 25-47 (COMPLEMENTARY)	1-23 25-47 (COMPLEMENTARY	C/T (1-23 25-47 (COMPLEMENTARY)
DACE	DACE	A/C	ر و/د	C,T
SEQ ID POLYMORPHISM BASE	POSITION*	24	24	24
SEQ ID	ż	99	67	68
PP SECUENCE	SEGULANCE	ACAAATCTATATAAGGCTGG	CTCTTGGTTAAACAGCAGTG	TGGCTCTGCATTTCTTCC
SEQ ID	ż		64	65
PII SEUIENCE	י כ פבלסבעפר	ATCAAATCAGTGAAGTCTGAG	ATCGCTGGAACATTCTGG	GATTTAAGCTACGCTATTAG
SEQ ID	N.(MUI)	09	61	62
SEQ ID	ż	22	58	29
MARKED	MONNEN	99-1482	4-73	4-65
BAC	2	189/463	463	463

FIG.6B

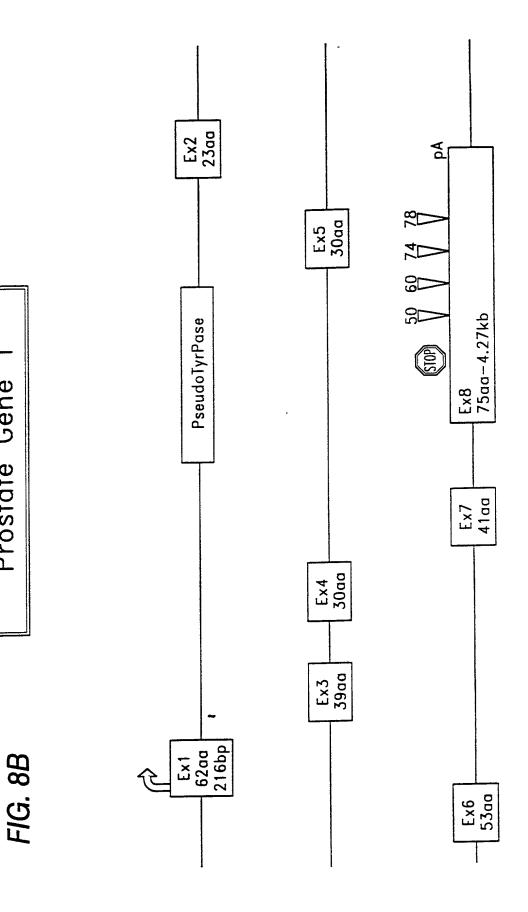
*: POSITIONS ARE GIVEN RELATIVE TO THE SEQUENCE OF THE CORRESPONDING MARKER (i.e. SEQ ID Nº 21-38 AND 57-62)

EXON Phase	START	END	5' SPsite	PHASE	3' SPsite
Ex1 +0	2001	2216			GTGAGC
Ex2 +1	18196	18265	TAG	+0	GTTTGTA
Ex3 +0	23717	23832	CAG	+2	GTAACT
Ex4 +0	25571	25660	CAG	+0	GTAAGA
Ex5 +2	34669	34759	CAG	+0	GTAAGT
Ex6 +1	40688	40846	TAG	+1	GTAAGT
Ex7 +2	48070	48193	TAG	+2	GTGAGT
Ex8	50182	54523	TAG	+1	
ATG codon	2031	2033			
STOP codon	50405	50407			
POLY Ad site	54445	54450			

-FIG. 7



Prostate Gene



		box 1	box 2	box 3
PG1	Hs	NHQ 81-83	FPEGTR 160-165	LDAIYDVTV 211-219
AF003136 (Genbank)	Се	NHQ 630-632	FPEGTR 712-717	LDAIYDVTV 762-770
Z72511 (Genbank)	Ce	48 NHR 50	FPEGTD 129-134	VEYIYDITI 204-212
P38226 (Swissport	Sc)	111 NHQ 113	FPEGTN 223-228	IESLYDITI 271-279
P33333 (Swissport	Sc)	81 NHQ 83	FPEGTR 154-159	-
Z49770 (Genbank)	Sc	116 NHQ 118	FPEGTN 215-220	LDAIYDVTI 265-273
P26647 (Swissport	Ec)	72 NHQ 74	FPEGTR 145-150	-
Z49860 (Genbank)	Bn	-	FVEGTR 90-95	VPAIYDMTV 138-146
U89336 (Genbank)	Hs	95 NHQ 97	FPEGTR 168-173	-
U56417 (Genbank)	Hs	103 NHQ 105	FPEGTR 176-181	-
AB005623 (Genbank)	Mm	100 NHQ 102	FPEGTR 173-178	
Z29518 (Genbank)	Zm	91 NHR 93	FVEGTR 170-175	VPAIYDTTV 218-226

Hs = Homo sapiens, Ce = Caenorabibitis elegans, Ec = Escherichia coli; Sc = Saccharomyces cerevisiae, Bn = Brassica napus, Zm = Zea maize,

Mm = Mus Musculus

Note: Funcitional acyl glycerol transferases all contain boxes 1 and 2 and not box 3. Proteins most related to PG1 contain the 3 boxes with a high degree of conservation.

^{- =} pattern absent from protein sequence

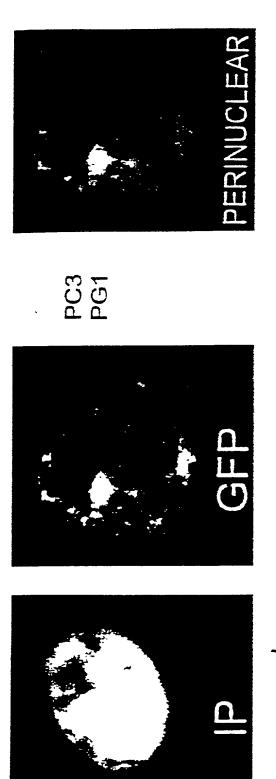










FIG. 10

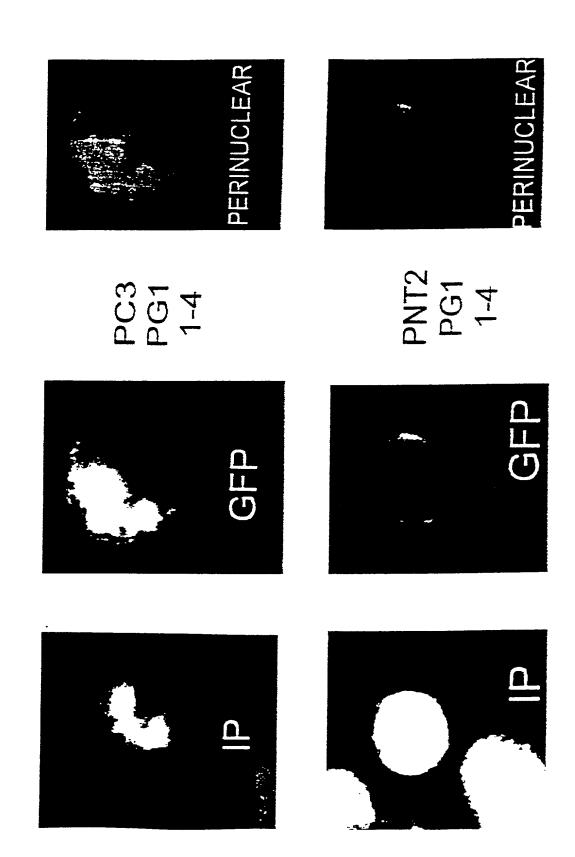
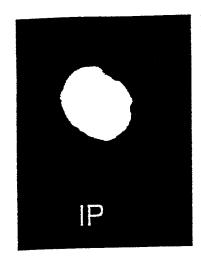


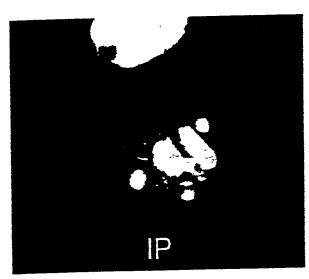
FIG. 11

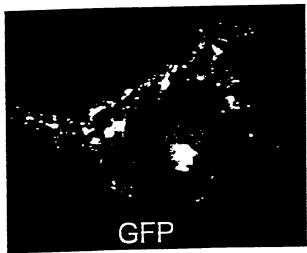




PC3 PG1 1-5







PNT2 PG1 1-5

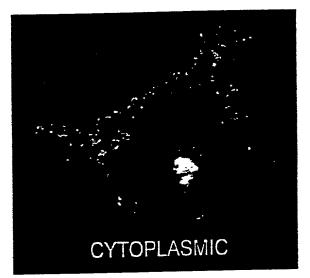
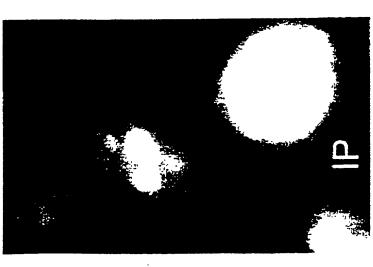


FIG. 12



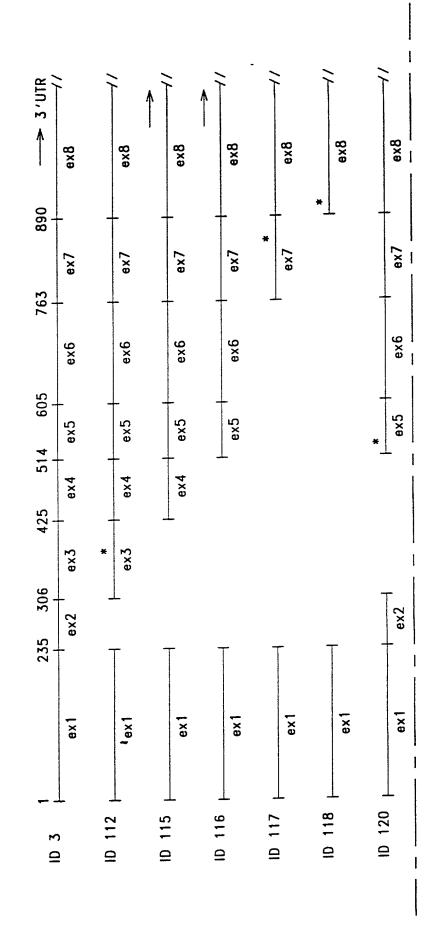




PNT2 PG1 mut229

FIG. 13

FIG. 14A FIG. 14B FIG. 14 Alternative splicing FIG. 14A



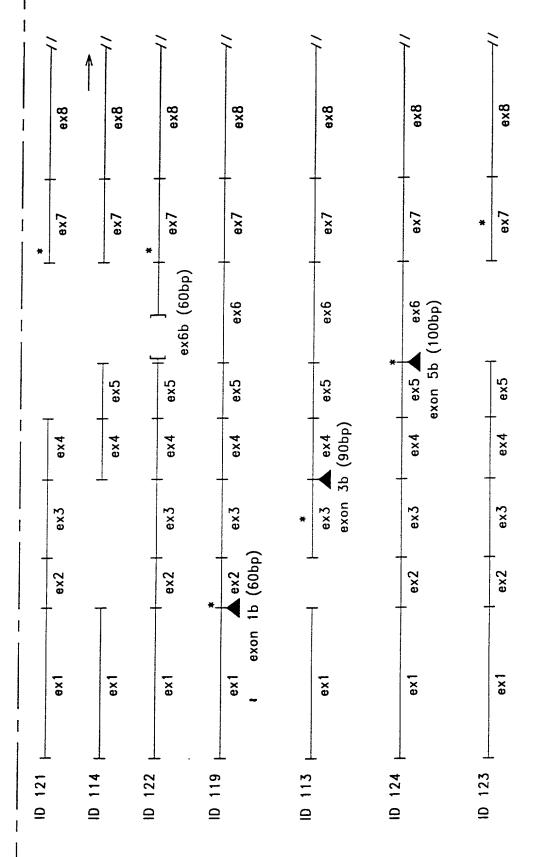


FIG. 14B

Combination of exons of PG1 gene discovered by PCR with primers specific for exon borders

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		OS WIE		:		!	į	, ; , ;	İ		1			1						
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Printer	one ostc	빗덩덩	4	MIC.	P6	77	P9	مام		CP 1	CP1	9	CPI	員	ā	, P2	, P2	0		0
Pri	SISINIZIA	SIZIC		50	2			2	기입	3	읾			ECP	2	ш	H	EC	Ξ	ŭ
PG1exon13		K4 K K K K	1/4/						ÚW.		7EX	4/4	14	(4)		W		19		W
PG1exon14	+ + + + + + + + + + + + + + + + + + + +	X+X+X+		400		4	XX		616	1		4/4	1	V	4					
PG1exon15	+1-1-1-1-	N	ri —	-++	-	-1-		-	- -	-	-	- i -	Ī-	_	_	_	_	-	_	_
PG1exon16	-1+1-1+1+	N	ri —	-1-	- 1	+;-			_ _	_	_	- -	-	-	· —	_	+	—	_	_
PG1exon17	++++++	+:+:N	[+	+1-	-1	+ -			+ +	1+1	+1	+++	+	—	. —	+	+	_	+	+
PG1exon18	++++++++	N	1+	+;-	-1		-1-	_ i.	- -	-	— i	+1-	Ī —	<u>; —</u>	-	-	-	-	_	_
PG1exon24	7-14-16-16-16-16-16-16-16-16-16-16-16-16-16-	46666	14	6/6		#X#	16	148	VXV	1	7	4/4	(+)	V	1				39	X
PG1exon25	:+ + -++	- - N	1+	- -	-	- i -	· i —	-1-	+ -	-	-1	+1-	Ī-	-	-	_	_	_	+	+
PG1exon26	V-V48-V484	A CONT	16	W.C		14X.t	XX	1	VXV		4	4/4	XX	18						
PG1exon27	·- - - + +	-i - : - : N	1+	_ I _	-	-;-	1-	— ! -	- +	-	-	+ -	Ī-	_	-	-	-	-	+	+
PG1exon28		N	<u></u>	-1-	_	_;_			-	-	-	_ -	-	-	-	_	-	-	-	_
PG1exon35	1-1-1-1-1-1	+ + N	ri + i	+!-	_			_;	+++	_	+1	+1+	-	_	+	+	+	+	-1	_
	V V V V V V V V V V V V V V V V V V V	00000	1/4/	44/4	148	484	(4)		666		4	FV	V.	(4)	1		19		79	79
PG1exon36	277722474747474	V_{N}	11 —	-,-	<u> </u>	_ _	—	-1-	_ i :	- I	_	— i —	-	_	-	_		-	-	_
PG1exon37		N	- I	+	_					_	-:	+ -	ī —	_	_	_	+	-	=	_
PG1exon38	22 V	<u> </u>	X.44	444	(4) (4)	1484	44	40	VXX		/	EV.	V.	1			14		7	74
PG1exon45	14144444444444444444444444444444444444	V (V	1/1/A	444		4	()		 		1	+ +	V	V					7	W
PG1exon47	70XVXVXVX	N/V// V///	7/53	<u> </u>	-1	$\frac{22}{1}$		- :-	- -	-	_	- -	-	_	-	-	_	-	_	_
PG1exon48	vereberek	2012012016	V/4	74X/4			14		CVC)	00	1	VVV	XX						3	7
PG1exon57	**************************************	+ + N	7/2/3 [] — [- 1 - 1	- I			<u>-1-</u>	- i -		-	- -	_	_	-	-	-	+	-1	_
PG1exon58		+ + N	- - +	+!-			.,+	+1-		+	+!	_ _	+	_	_	_	+	_	+	+
	+++++++++	+ + N	1 +	+ -	+1	_ ;+	.,+	+1-	+++	+	+1	-1-	1+	-	-	+	+	+1	-	+
PG1exon11b	++++++++	+ + N	<u> </u>	+;-	+	- 1	+	+	+ +	+	+:	-1-	1+	-	_	+	+	+	-	+
PG1exon1b2	777.832.832.VC.VI	WWW.Cho	1/4	1484		264	14	1	400	1	/	4/4	V.V.	(4)	19					W.
PG1exon1b3		· + + +	$\frac{\sqrt{2}\sqrt{2}\sqrt{2}}{1+1}$	+1-	- 1	/////	+	+	- -	-	+1	+1+	1+	-	+	+	-	-	+1	_
PG1exon1b5		+ ; + ;N	<u> </u>	+ -	_ ;	+1-	.,_		+++	_	_:	+1-	+	ī —	_	+	+	+	+	-
PG1exon1b5	/// / 	XXXXXXX	14	14/14	181		XX.	بإنترا	¥X.¥.		4	+//	XX	X	1	(4)		4	79	W.
PG1exon150	+++++	-1+1+1N	1 +	+1+	+		-	+1.	- -	-	-1	- -	Ī-	—	_	-	-		-	-
PG1exon1b8		+ - N			+1				_ _	-	-1	- -	-	–	-	-	-	_	-	_
PG1exon156	THE REPORT OF	XXXXXX		1400	1	4)/t	14	CHE.	VXV	1	4	4/4	XX	W.	1				2	H
PG1exon3b5		- - N	[- !	<u> </u>	-	- -	· -	- -	<u> </u>	-	<u>- </u>	- -	—	-	-	-	-	-	_	_
PG1exon3b6	1111 CX CX CX CX	CE CH	1	1400		4/4	1.4.		V VV		+	47/4	XX		(V)				2	
PG1exon3b6	+ - + +	- - + N	[-	/:////	+	_ -		- 1	<u> </u>	-	-	+ +	-	-	+	_	-	-	_	_
PG1exon3b8		N			-	= -	-;-	- ;-	- -	-		- -	-	-	_	-	_	-	_	_
PG1exon5b6	+++	- + N			+	-i-			+ +	-	-1	- -	-	-	-	_	_		_	_
PG1exon5b7	+1-++					- -	- ;	-:-	- -	-	-1	- +	-	_	_	_	_	_	_	_
PG1exon5b8		N			-	-1-	- -	-!-	-1-	-	-	_ -	_	-	-	_	-	_	_	-
PG1exon56b	**************************************					4/4	46	1	\	(4)	1	+ 14	XX	(A)	04			2		1
PG1exon46b	V/V4V4V4V4	VIVIVIII							4/4		4	\$	XX			0	0		00	8
PG1exon36b	WELLER	e e e ne		/ / / / / / / / / / / / / / / / / / / /						777.1	11111	SXX	XX							Ø.
PG1exon26b	111111111111111111111111111111111111111	ALL LINE	1	484	1	4/+	1,4,	14%	VVV			*XX	XX		6					
PG1exon16b	- 777 47 V77 V . 2 V7	1+1+100		484	4	4	+		CVV			4/4	XX			0%	64	62	6	0
. C.CXCIIIOD	Market Market Control		لننك																	

[+] alternative splicing form with combination of exons 13478 instead of 1345678

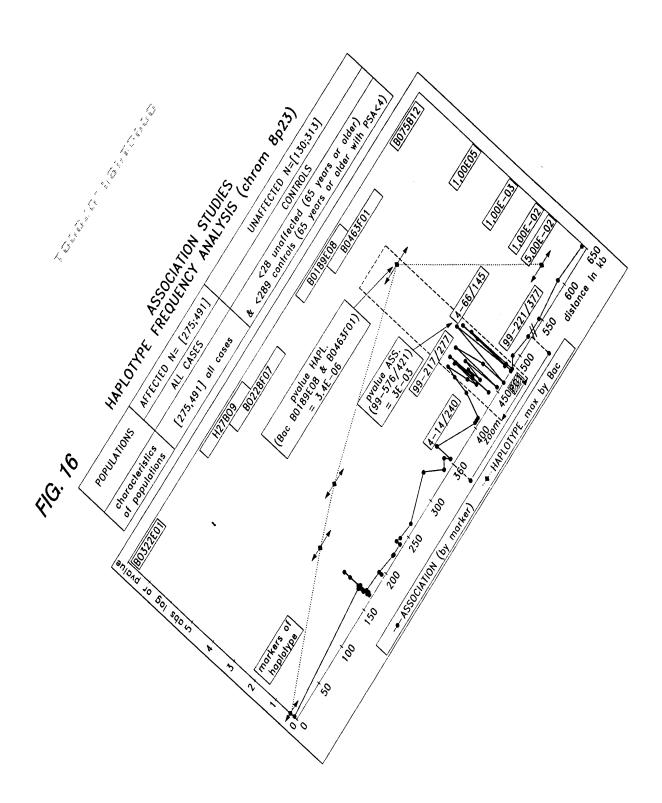
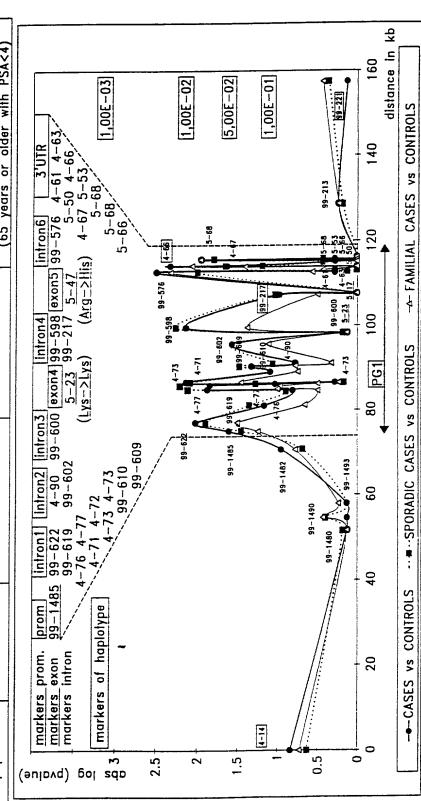


FIG. 17

ASSOCIATION STUDIES PG1 (8p23)

POPULATIONS		AFFECTED N= [275;491]		UNAFFECTED N=[130;313]
	ALL CASES	SPORADIC CASES	FAMILIAL CASES	CONTROLS
characteristics of populations	<=491 all cases	<=294 sporadics cases <=197 familial cases	<=197 familial cases	<28 unaffected (65 years or older) & <=289 controls (65 years or older with PSA<4)

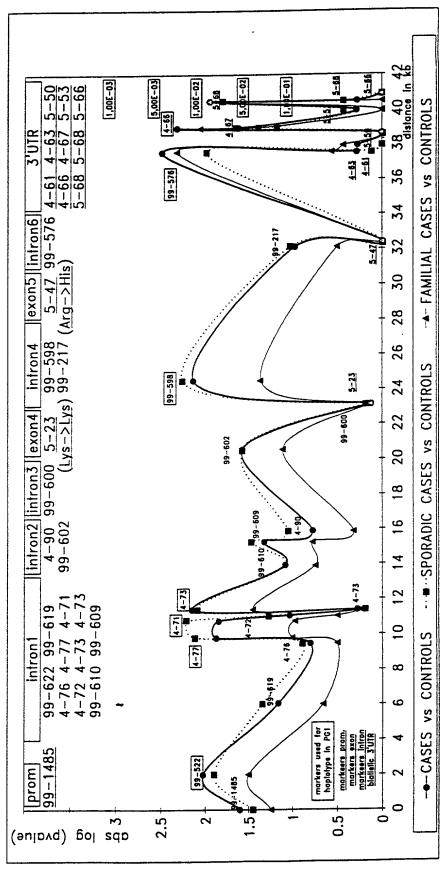


ASSOCIATION STUDIES

FIG. 18A

PG1 (8p23)

POPULATIONS		AFFECTED N= [275;491]		UNAFFECTED N=[130;313]
	ALL CASES	SPORADIC CASES	FAMILIAL CASES	CONTROLS
characteristics of populations	characteristics of populations <=491 all cases <=294	1	sporadics cases <=197 familial cases	<pre><28 unaffected (65 years or older) & <=289 controls (65 years or older with PSA<4)</pre>



σ)																			
Attributable Risk	17.58	QN	QN	13.15	18.16	18.64	13.25	26.76	QN	ON	9.32	ON	QN	QN	8.46	18.40	ON	13.16	10.97
Freq(randoms)	0.29	\$QN	QN	0.41	0.31	0.28	0.31	0.52	QN	ON	0.28	QN	ON	QN	0.28	0.24	QN	0.24	0.24
Pvalue	2.53E-02	9.64E-03	6.93E-02	1.57E-01	1,35E-02	1.43E-02	9.43E-02	7.29E-03	8.33E-02	4.83E - 02	1.68E-01	2.69E-02	7.52E-01	7.29E-03	1.07E-01	3.18E-03	0,527§	4.68E-03	2.39E-02
Odd Ratio	1.44	1.51	1.37	1.23	1.43	1.49	1.29	1.48	1.30	1.36	1.25	1.44	1.01	1.55	1.20	1.72	1.76	1.43	1.33
abs diff % (fg(cases)— (fg(controls))	7.4	10.1	5.8	5	7.4	8.3	5.7	9.7	6.2	7	4.4	7.4	0.3	9.2	3.8	9.2	0.3	6.2	4.9
Freq(controls)	0.24	0.42	0.22	0.38	0.26	0.26	0.30	0.42	0.37	0.30	0.25	0.25	0.34	0.25	0.28	0.17	00.00	0.19	0.20
Freq(cas)	0.32	0.52	0.28	0.43	0.34	0.34	0.36	0.52	0.43	0.37	0.29	0.33	0.34	0.35	0.31	0.27	0.01	0.25	0.25
Polym.	L/*9	6/1	C/T	G/A	2/9	A/G	A/6	2/9	, G/A	A/T	A/C	A/6	1/A	G/A	2/1	3/9	G/A	1/2	1/0
PG1	prom	in1	in 1	in	in1	In I	in 1	in1	in 1	Ē	in2	in2	in3	in4	in4	in6	3'UTR	3'UTR	3'UTR
name of markers	99-1485/251	99-622/95	99-619/141	4-76/222	4-77/151	4-71/233	4-72/127	4-73/134	99-610/250	99-609/225	4-90/283	99-602/258	99-600/492	99-598/130	99-217/277	99-576/421	4-61/269	4-66/145	4-67/40

§ Test Fisher—\$ ND: Not done —* disease associated allele / not associated allele

FIG. 18B

FIG. 19A HAPLOTYPE FREQUENCY ANALYSIS

POPULATIONS	AFFECTED	UNAFFECTED
sample sizes	CASES (n=491)	CONTROLS (n=317)
characteristics of populations	294 sporadic cases + 197 familial cases	28 unaffected (65 years or older) + 289 controls (65 years or older with PSA<4)

	 		4-14/240	99-217/277	4-66/145	99-221/377
4-			4-14/240	33-217/217		33 221/3//
PG1 (8	p23)		in4	3'UTR	
distance bet	ween	mks	<100	0kb> <17	kb> <43	kb>
size (cases v			481 vs 305	481 vs 302	481 vs 300	481 vs 303
		controls)	65,7/62,1(C)	31,3/27,5(C)	25,1/19(C)	42,7/42,91 (A)
abs diff freq. all.(cases	-controls)	3.6	3.8	6.2	0
pvalu			1.47E-01	1.07E-01	4.68E-03	7.52E-01
Hardy Weindeberg		cases	5.84E-01	6.55E-01	2.54E-01	5.84E-01
Disequilibrium	(controls	4.80E-01	2.21E-01	3.71E-01	2.54E-01
HAP 1 <43kb>		451 vs 297			11/19/1/1	11/11/14/19
HAP 2 <17kb>		451 vs 296		ा ग		
HAP 3 <117kb>		452 vs 299	C 22.	1. 1. 14	/// \$ /////	
HAP 4 <100kb>		479 vs 302		430 基 %。	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
HAP 5 <60kb>		476 vs 300		1000年 (於		
HAP 6 <160kb>	PT2	476 vs 303	7-1-12 C2 12			11111111C. 11
HAP 7 <160kb>		447 vs 297	1.141 9 ,141	1 1 1 1 1/4		
HAP 8 <60kb>		446 vs 294		A JE KO		
HAP 9 <117kb>		450 vs 296	E	グーT ※		
HAP 10 <160kb>	PT3	474 vs 300	1977 C. 11/2	<u> 8 T (4</u>		(2) (1) (A) (A)
HAP 11 <160kb>	PT4	445 vs 294	()	t j.V	12.76 0 2.723	%, 375 /¥

haplo freque					
cases	controls	Odd ratio	Chi-S	Pvali	1e
0.116	0.067	1.83	9.85	(1.7e-03)	***
0.243	0.183	1.43	7.49	(6.2e-03)	**
0.182	0.130	17:49	7.18	(7.3e-03)	**
0.217	0.188	1.20	1.88	(1.7e-01)	*
0.155	0.132	1.20	1.54	(2.1e-01)	*
0.373	0.346	1.12	1.16	(2.7e-01)	*
0.095	0.042	2.39	14.62	(1.3e-04)	****
0.117	0.065	1.93	11.33	(7.3e-04)	***
0.178	0.125	1.53	7.80	(5.2e-03)	**
0.114	0.089	1.32	2.44	(1.1e-01)	*
0.095	0:032	// / 3 218; /	21.59	(3.4e-06)	***** / //

FIG. 19B

HAPLOTYPE FREQUENCY ANALYSIS

markers	4-14/240	4-14/240 99-217/277	4-66/145	99-221/377
of haplotype Max		in4	3'UTR	
	O	-	၁	Ą
distance between mks	\ 	100kb> <1	<17kb> <	<43kb>

so ols 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								
cases vs controls control control 3.18 21.59 3.40E-06 ** 455 vs 294 0.095 0.032 3.56 20.91 4.60E-06 ** 171 vs 294 0.105 0.032 2.60 12.13 4.80E-04 ** 271 vs 294 0.096 0.032 3.23 19.73 8.60E-06 ** s controls 85 vs 294 0.095 0.032 2.82 12.04 5.00E-04 controls 178 vs 294 0.085 0.032 2.82 12.75 3.50E-04 controls 67 vs 294 0.085 0.032 2.00 2.70 9.40E-02 controls 179 vs 294 0.098 0.032 3.32 18.33 1.80E-05 controls 86 vs 294 0.012 0.032 3.48 6.59 1.00E-05 controls 93 vs 294 0.012 0.032 2.48 6.59 1.00E-05 controls 93 vs 294 0.0123 2.48 6.59 1.0		ample sizes	haplo freque	ıtype ıncles	odd	chi-S	P va	ne
ontrols 455 vs 294 0.095 0.032 3.18 21.59 3.40E-06 ** Introl 271 vs 294 0.105 0.032 3.56 20.91 4.60E-06 ** Introl 271 vs 294 0.079 0.032 2.60 12.13 4.80E-04 ** Introl 266 vs 294 0.096 0.032 3.23 19.73 8.60E-06 ** Introl 85 vs 294 0.095 0.032 2.82 12.75 3.50E-04 ** Introl 67 vs 294 0.062 0.032 2.00 2.70 9.40E-02 ** Introl 67 vs 294 0.062 0.032 2.00 2.70 9.40E-02 ** Introl 67 vs 294 0.098 0.032 3.83 17.98 2.20E-05 Introl 93 vs 294 0.012 0.032 2.48 6.59 1.00E-05 Introl 93 vs 294 0.012 0.032 2.48 6.59 1.00E-05 Introl	I	cases vs control	CGSBS	controls				
ontrols 171 vs 294 0.105 0.032 3.56 20.91 4.60E-06 4 ntrol 271 vs 294 0.079 0.032 2.60 12.13 4.80E-04 rars) vs controls 85 vs 294 0.095 0.032 3.23 19.73 8.60E-06 rs) vs controls 85 vs 294 0.095 0.032 2.82 12.04 5.00E-04 es vs controls 67 vs 294 0.062 0.032 2.00 2.70 9.40E-02 es vs controls 67 vs 294 0.062 0.032 3.32 18.33 1.80E-05 ars) vs controls 86 vs 294 0.012 0.032 3.83 17.98 2.20E-05 s) vs controls 93 vs 294 0.075 0.032 2.48 6.59 1.00E-02 s) vs controls 93 vs 294 0.0123 2.48 6.59 1.00E-02 s) vs controls 93 vs 294 0.0123 2.48 6.59 1.00E-02		455 vs 294	0.095	0.032	3.18	21.59	3.40E-06	***
ntrol 271 vs 294 0.079 0.032 2.60 12.13 4.80E-04 stars) vs controls 85 vs 294 0.096 0.032 3.23 19.73 8.60E-06 1 rs) vs controls 178 vs 294 0.095 0.032 2.82 12.75 3.50E-04 es vs controls 67 vs 294 0.065 0.032 2.00 2.70 9.40E-02 ars) vs controls 86 vs 294 0.098 0.032 3.32 18.33 1.80E-05 s) vs controls 86 vs 294 0.012 0.032 3.83 17.98 2.20E-05 s) vs controls 93 vs 294 0.012 0.032 2.48 6.59 1.00E-02 s) vs controls 93 vs 294 0.0123 0.032 2.48 6.59 1.00E-02 s) vs controls 79 vs 294 0.123 0.032 2.48 6.59 1.00E-02	ontrols	171 vs 294	0.105	0.032	3.56	20.91	4.60E-06	*****
rars) vs controls 266 vs 294 0.096 0.032 3.23 19.73 8.60E-06 4 rs) vs controls 85 vs 294 0.095 0.032 2.82 12.75 3.50E-04 es vs controls 67 vs 294 0.062 0.032 2.00 2.70 9.40E-02 ars) vs controls 86 vs 294 0.012 0.032 3.83 17.98 2.20E-05 s) vs controls 93 vs 294 0.075 0.032 2.48 6.59 1.00E-02 s) vs controls 93 vs 294 0.0123 0.032 2.48 6.59 1.00E-02 s) vs controls 93 vs 294 0.123 0.032 2.48 6.59 1.00E-02 s) vs controls 79 vs 294 0.123 0.032 2.48 6.59 1.00E-02	ntrol	271 vs 294	0.079	0.032	2.60	12.13	4.80E-04	***
rs) vs controls 85 vs 294 0.095 0.032 3.20 12.04 5.00E-04 rs) vs controls 178 vs 294 0.085 0.032 2.82 12.75 3.50E-04 es vs controls 67 vs 294 0.062 0.032 2.00 2.70 9.40E-02 ars) vs controls 86 vs 294 0.112 0.032 3.32 18.33 17.98 2.20E-05 s) vs controls 93 vs 294 0.075 0.032 2.48 6.59 1.00E-02 1.00E-02 s) vs controls 79 vs 294 0.123 0.032 2.48 6.59 3.70E-06		266 vs 294	0.096	0.032	3.23	19.73	8.60E-06	***
178 vs 294 0.085 0.032 2.82 12.75 3.50E-04 67 vs 294 0.062 0.032 2.00 2.70 9.40E-02 179 vs 294 0.098 0.032 3.32 18.33 1.80E-05 86 vs 294 0.112 0.032 3.83 17.98 2.20E-05 93 vs 294 0.075 0.032 2.48 6.59 1.00E-02 79 vs 294 0.123 0.032 4.26 21.33 3.70E-06	ars) vs controls	85 vs 294	0.095	0.032	3.20	12.04	5.00E-04	*
67 vs 294 0.062 0.032 2.00 2.70 9.40E-02 179 vs 294 0.098 0.032 3.32 18.33 1.80E-05 s 86 vs 294 0.112 0.032 3.83 17.98 2.20E-05 93 vs 294 0.075 0.032 2.48 6.59 1.00E-02 79 vs 294 0.123 0.032 4.26 21.33 3.70E-06	re) vs controls	178 vs 294	0.085	0.032	2.82	12.75	3.50E-04	***
179 vs 294 0.098 0.032 3.32 18.33 1.80E-05 86 vs 294 0.112 0.032 3.83 17.98 2.20E-05 93 vs 294 0.075 0.032 2.48 6.59 1.00E-02 79 vs 294 0.123 0.032 4.26 21.33 3.70E-06	se ve controls	67 vs 294	0.062	0.032	2.00	2.70	9.40E-02	**
86 vs 294 0.112 0.032 3.83 17.98 2.20E-05 93 vs 294 0.075 0.032 2.48 6.59 1.00E-02 79 vs 294 0.123 0.032 4.26 21.33 3.70E-06		179 vs 294	0.098	0.032	3.32	18.33	1.805-05	****
93 vs 294 0.075 0.032 2.48 6.59 1.00E-02 79 vs 294 0.123 0.032 4.26 21.33 3.70E-06	re) ve controls	86 vs 294	0.112	0.032	3.83	17.98	2.20E-05	****
79 vs 294 0.123 0.032 4.26 21.33 3.70E-06	s) vs controls	93 vs 294	0.075	0.032	2.48	6.59	1.00E-02	**
	familial cases (>=3 cap) vs controls	79 vs 294	0.123	0.032	4.26	21.33	3.70E-06	****

HAPLOTYPE FREQUENCY ANALYSIS (PG1) FIG. 20

										_	_			
		99-622/95	4-77/151	4-71/233	4-73/134	99-598/130	99-576/421	4-66/145	hapl	haplotype				
Markers in PG1		1/9	9/0	A/G	C/G	ΑG	S/C	СЛ				-		
			I			In4	in6	3'UTR	frequ	frequencies				
(alorings ay seems) sele		336 vs 108	363 vs 173	336 vs 130	352 vs 129	347 vs 126	355 vs 129	456 vs 306						
(Slouthorn to see and balls	ontrois	52/42 (G)	34/26 (G)	34/26 (A)	52/42 (G)	35/25 (G)	27/17 (G)	25/19 (C)						
allelic frequency of capacity	1	Q	31 (G)	28 (A)	52 (G)	QN	24 (G)	24 (C)						
Silenc inequelity A (initialization)	trolei	101	7.4	83	9.7	9.2	9.2	6.2	CRSes	controls	ppo	Attributable	Pvalue	
dill led. all. A leased		9.64E-03	1 35E-02	1.43E-02	7.29E-03	7 29E-03	3 18E-03	4 68E-03			Ratio	Risk %	(cases vs controls)	ols)
(alonto o au access) automo		:	:	:	:	:	:	:						
Odd Ratio		151	1 43	1 49	1 48	1.55	1.72	1 43						
Attributable Risk %		QN	18 16	18 64	26 76	S	8 46	13 16						
Hardy	\$5	7.52E-01	7.52E-01	5 84E-01	7 52E-01	7.52E-01	7.52E-01	3 43E-01						
	- lor	4 39E-01	4 03E-01	1 21E-01	7 52E-01	6 52E-02	7 52E-01	1 29E-01					-	
3 11 6	119 vs 167								0.263	0.152	1.99	18.55	(6.7e-05)	
+	220 122								0 259	0 147	202	웃	(3 9e-04)	
haplotype Z 3 MrS	330 43 155								0 259	0 147	2 0 2	QN	(4 19-04)	
haplotype 3 4 MKS	312 vs 122								92.0	0 148	2 01	Q	(4 86-04)	
haplotype 4 5 MKS	311 vs 121								200	9440	·	Ę.	(5 30 04)	
haplotype 5 6 MKS	309 vs 121								0 266	4	, ,	Ş	(1 6e 03)	
haptotype 6 7 MKS	290 vs 99				7775			777777777777777777777777777777777777777	7 1 7 7 7	4			CN	ND Not Done

FIG. 21

Comparison of Pvalue between nb of mks for haplotype (19 mks of PG1)

		# of 2 mks	# of 3 mks	# of mks
GFNE	# of markers	combinations	combinations	combinations
				1 1
PG1	19	171	696	38/6

